

Kidney Development Gene Expression Database

Overview of Kidney Development

Kidney Development Data and RG -U34 chip information

The link below provides access to the data described in Stuart RO, Bush KT, Nigam SK Sci USA 98:5649-5654, 2001 in Excel format. We ask that all derivative work cite this reference.

Download Data

KidDev.xls. All arrays globally scaled to TGT = 2500.

The "Equalized" version of the kidney development data is [here](#).

Software and Tools

We have tentatively identified 5 canonical groups of gene expression on the basis of available data. Finer grouping of genes will become possible with additional data from the native kidney structures. As in the [PNAS paper](#), groups were identified according to the links below. Individual group members, genes with expression patterns "like" the those of a particular group and making the stringent threshold are included. These are marked as "1I," "2I," etc in the data.

RG-U34A Gene Lists

Rat RG-U34A chip information in Excel format with Entrez hyperlinks and group membership. Similar files for other arrays are [available](#). Alternate Rat RG-U34A chip information (blast bit score > 100) accessions in place of uninformative EST links. Similar files for other arrays are [available](#).

Group1 genes: highest expression early in development

Gene Expression sites

Group2 genes: highest expression in mid-embryogenesis

Group3 genes: highest expression in neonatal life

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Group4 genes: increasing though embryogenesis into adulthood

Group5 genes: low expression except in the adult

About KDGED

The data in the rightmost columns has been "compressed" to a maximum value of 3 for purposes.

Group1 and group1-like genes

probeID	acc	Grp	AFXdef
AA848218_at	AA848218	1	EST190978 Normalized rat heart, Bento Soares Rattus sp. cDNA clone RHEAC12 5' end similar to DNA topoisomerase I, mRNA sequence [Rattus sp.]
AA944073_at	AA944073	1	EST199572 Rattus norvegicus cDNA, 5' end /clone=REMAA79/clone_end=5'/gb=AA944073 /gi=3103989 /ug=Rn.2833 /len=48
AB002086_g_at	AB002086	1	Rattus norvegicus mRNA for p47, complete cds /cds=(108,1220) /gb=AB002086 /gi=2285789 /ug=Rn.2771 /len=1451
AB011679_at	AB011679	1	Rattus norvegicus mRNA for class I beta-tubulin, complete cds
AB012214_s_at	AB012214	1	Rattus rattus mRNA for DNA cytosine 5 methyltransferase, complete cds
AB015042_s_at	AB015042	1	Rattus norvegicus mRNA for drebrin E, partial cds
AB016931_s_at	AB016931	1	Rattus norvegicus mRNA for AGR16, complete cds
AB017188_g_at	AB017188	1	Rattus norvegicus mRNA for antisecretory factor, complete cds
AF000942_at	AF000942	1	Rattus norvegicus Id3a mRNA, complete cds
AF016047_at	AF016047	1	Rattus norvegicus platelet-activating factor acetylhydrolase alpha 1 subunit (PAF-AH alpha 1) gene, complete cds /cds=(0,698) /gb=AF016047 /gi=2501856 /ug=Rn.17971 /len=699
AF016503_s_at	AF016503	1	Rattus norvegicus procollagen C-proteinase enhancer protein (PCPE) mRNA, complete cds
AF022729_at	AF022729	1	Rattus norvegicus HNK-1 sulfotransferase mRNA, complete cds /cds=(257,1327) /gb=AF022729 /gi=2660715 /ug=Rn.11224 /len=2631
AF030091UTR#1_g_at	AF030091	1	Rattus norvegicus activity and neurotransmitter-induced early gene 6 (ania-6) mRNA, 3'UTR
AF035951_at	AF035951	1	Rattus norvegicus kinesin-related protein KRP1 (KRP1) mRNA, partial cds
AF036335_at	AF036335	1	Rattus norvegicus NonO/p54rb homolog mRNA, partial cds /cds=(0,506) /gb=AF036335 /gi=2674208 /ug=Rn.1926 /len=1020
AF036335_g_at	AF036335	1	Rattus norvegicus NonO/p54rb homolog mRNA, partial cds /cds=(0,506) /gb=AF036335 /gi=2674208 /ug=Rn.1926 /len=1020
AF052695_at	AF052695	1	Rattus norvegicus cell cycle protein p55CDC gene, complete cds /cds=(192,1691) /gb=AF052695 /gi=3088631 /ug=Rn.9262 /len=1777
AF056324_at	AF056324	1	Rattus norvegicus scaffold attachment factor B mRNA, complete cds
AF062594_at	AF062594	1	Rattus norvegicus nucleosome assembly protein mRNA, complete cds
AF063102_at	AF063102	1	Rattus norvegicus calcium-independent alpha-latrotoxin receptor homolog 2 (CIRL-2) mRNA, complete cds
AF063102_g_at	AF063102	1	Rattus norvegicus calcium-independent alpha-latrotoxin receptor homolog 2 (CIRL-2) mRNA, complete cds
AF063447_at	AF063447	1	Rattus norvegicus nuclear RNA helicase mRNA, complete cds /cds=(99,1382) /gb=AF063447 /gi=3132828 /ug=Rn.14550 /len=1511
AF067795_g_at	AF067795	1	Rattus norvegicus BFA-dependent ADP-ribosylation substrate BARS50 (Bars) mRNA, complete cds
AF069782_at	AF069782	1	Rattus sp. unknown mRNA
AF072892_s_at	AF072892	1	Rattus norvegicus versican V3 isoform precursor, mRNA, complete cds
AF087437UTR#1_s_at	AF087437	1	Rattus norvegicus PEPB2 beta mRNA, 3' UTR
AF090306_s_at	AF090306	1	Rattus norvegicus retinoblastoma binding protein mRNA, complete cds
AF104399_g_at	AF104399	1	Rattus norvegicus melanocyte-specific gene 1 protein (msg1) mRNA, complete cds
AJ001929_s_at	AJ001929	1	RNAJ1929 Rattus norvegicus mRNA for of CBP-50 protein
AJ005113_g_at	AJ005113	1	RNAJ5113 Rattus norvegicus mRNA for SMC-protein Molecular characterization of a rat heterochromatin associated SMC-protein
AJ005394_at	AJ005394	1	RNJ005394 Rattus norvegicus mRNA for collagen alpha 1 type V
AJ224879_at	AJ224879	1	Rattus norvegicus mRNA for collagen alpha 1 type II, partial CDS /cds=(0,146) /gb=AJ224879 /gi=3164120 /ug=Rn.10124 /len=580
D10756_g_at	D10756	1	RATPRORZ Rat mRNA for proteasome subunit R-ZETA, complete cds
D12770_s_at	D12770	1	RATANT1 Rat mRNA for mitochondrial adenine nucleotide translocator

Group2 and group2-like genes

probeID	acc	Grp	AFFXdef
A09811cds_s_at	A09811	2	R.norvegicus mRNA for BRL-3A binding protein
AB008538_at	AB008538	2	Rattus norvegicus mRNA for HB2, complete cds /cds= (188,1939) /gb=AB008538 /gi=2589006 /ug=Rn.5789 /len=2866
AB011369_s_at	AB011369	2	Rattus norvegicus mRNA for RBCK2, complete cds
AF031522_s_at	AF031522	2	Rattus norvegicus galanin receptor type 3 (GALR3) mRNA, complete cds
AF061752_at	AF061752	2	Rattus norvegicus msf-1 mRNA, partial cds
AJ011656cds_s_at	AJ011656	2	RNO011656 Rattus norvegicus cldn3 gene
D17512_at	D17512	2	Rat mRNA for CRP2 (cysteine-rich protein 2), complete cds /cds= (56,682) /gb=D17512 /gi=487283 /ug=Rn.1196 /len=1154
J04486_at	J04486	2	Rat insulin growth factor-binding protein mRNA, complete cds /cds= (263,1177) /gb=J04486 /gi=203175 /ug=Rn.6813 /len=1482
K03486_s_at	K03486	2	RATPKC32 Rat protein kinase C type III mRNA, 3' region
L00191cds#1_s_at	L00191	2	RATFN3M1 Rat fibronectin (cell-, heparin-, and fibrin-binding domains) gene encoding three fibronectin mRNAs, exons 1,2,3
L13039_s_at	L13039	2	RATANXIIA Rat annexin II mRNA, complete cds
L23148_g_at	L23148	2	Rattus norvegicus inhibitor of DNA-binding, splice variant Id1.25, complete cds /cds= (61,555) /gb=L23148 /gi=516116 /ug=Rn.2113 /len=1124
L38483_at	L38483	2	Rattus norvegicus jagged protein mRNA, complete cds /cds= (386,4045) /gb=L38483 /gi=1492110 /ug=Rn.11254 /len=5575
M21354_s_at	M21354	2	RATCOL3A1 Rat collagen type III alpha-1 mRNA, partial cds
M27207mRNA_s_at	M27207	2	RATCOL1A1 Rattus norvegicus (clone pL6-3-1) alpha-1 type I collagen mRNA, 3' UTR
M64780_at	M64780	2	Rat agrin mRNA, complete cds /cds= (201,6023) /gb=M64780 /gi=202798 /ug=Rn.2163 /len=7286
M64780_g_at	M64780	2	Rat agrin mRNA, complete cds /cds= (201,6023) /gb=M64780 /gi=202798 /ug=Rn.2163 /len=7286
M83107_g_at	M83107	2	Rat SM22 mRNA, complete cds /cds= (162,767) /gb=M83107 /gi=202982 /ug=Rn.774 /len=1169
M91595exon_s_at	M91595	2	RATILGFBPA Rattus norvegicus insulin-like growth factor binding protein-2 gene, exon 1
M94918mRNA_f_at	M94918	2	RATBETGLOX Rat beta-globin gene, exons 1-3
M94919mRNA_f_at	M94919	2	RATBETGLOY Rat beta-globin gene, exons 1-3
rc_AA799406_at	AA799406	2	EST188903 Rattus norvegicus cDNA, 3' end /clone=RHEAA79 /clone_end=3' /gb=AA799406 /gi=2862361 /ug=Rn.90 /len=591
rc_AA799448_g_at	AA799448	2	EST188945 Rattus norvegicus cDNA, 3' end /clone=RHEAB18 /clone_end=3' /gb=AA799448 /gi=2862403 /ug=Rn.8296 /len=615
rc_AA800748_at	AA800748	2	EST190245 Rattus norvegicus cDNA, 3' end /clone=RLUAK96 /clone_end=3' /gb=AA800748 /gi=2863703 /ug=Rn.1671 /len=585
rc_AA849769_g_at	AA849769	2	EST192536 Rattus norvegicus cDNA, 3' end /clone=RMUAI64 /clone_end=3' /gb=AA849769 /gi=2937309 /ug=Rn.2979 /len=608
rc_AA859496_at	AA859496	2	UI-R-E0-bv-g-08-0-UI.s1 Rattus norvegicus cDNA, 3' end /clone=UI-R-E0-bv-g-08-0-UI /clone_end=3' /gb=AA859496 /gi=2949016 /ug=Rn.5933 /len=503
rc_AA859885_at	AA859885	2	UI-R-E0-cc-c-12-0-UI.s1 Rattus norvegicus cDNA, 3' end /clone=UI-R-E0-cc-c-12-0-UI /clone_end=3' /gb=AA859885 /gi=2949405 /ug=Rn.805 /len=537
rc_AA866276_at	AA866276	2	UI-R-A0-bg-b-06-0-UI.s1 Rattus norvegicus cDNA, 3' end /clone=UI-R-A0-bg-b-06-0-UI /clone_end=3' /gb=AA866276 /gi=2961737 /ug=Rn.3035 /len=476
rc_AA874802_s_at	AA874802	2	UI-R-E0-bw-g-07-0-UI.s1 Rattus norvegicus cDNA, 3' end /clone=UI-R-E0-bw-g-07-0-UI /clone_end=3' /gb=AA874802 /gi=2979750 /ug=Rn.3129 /len=536
rc_AA875225_at	AA875225	2	UI-R-E0-cq-a-06-0-UI.s1 Rattus norvegicus cDNA, 3' end /clone=UI-R-E0-cq-a-06-0-UI /clone_end=3' /gb=AA875225 /gi=2980173 /ug=Rn.3036 /len=421
rc_AA875531_s_at	AA875531	2	UI-R-E0-cv-f-12-0-UI.s1 Rattus norvegicus cDNA, 3' end /clone=UI-R-E0-cv-f-12-0-UI /clone_end=3' /gb=AA875531 /gi=2980479 /ug=Rn.256 /len=433

Group3 and group3-like genes

probeID	acc	Grp	AFFXdef
A04674cds_s_at	A04674	3	R.norvegicus brown adipose tissue mitochondrial mRNA for uncoupling protein (partial)
AF001898_at	AF001898	3	Rattus norvegicus aldehyde dehydrogenase (ALDH) mRNA, complete cds /cds= (28,1533) /gb=AF001898 /gi=2183216 /ug=Rn.6132 /len=2095
AF017637_at	AF017637	3	Rattus norvegicus, PC12 cells, carboxypeptidase Z mRNA, complete cds /cds= (63,2021) /gb=AF017637 /gi=2921087 /ug=Rn.11056 /len=2150
AF037072_at	AF037072	3	Rattus norvegicus carbonic anhydrase III (CA3) mRNA, complete cds /cds= (33,815) /gb=AF037072 /gi=2708635 /ug=Rn.22519 /len=1053
D00569_g_at	D00569	3	Rat mRNA for 2,4-dienoyl-CoA reductase (EC 1.3.1.34) /cds= (18,1025) /gb=D00569 /gi=220731 /ug=Rn.2854 /len=1118
J04035_at	J04035	3	Rat tropoelastin mRNA, 3' end /cds= (0,254) /gb=J04035 /gi=207442 /ug=Rn.11300 /len=1211
J05166_at	J05166	3	Rat band 3 Cl-/HCO3- exchanger (B3RP2) mRNA, complete cds /cds= (200,3904) /gb=J05166 /gi=203090 /ug=Rn.9860 /len=4057
L06040_s_at	L06040	3	Rattus norvegicus 12-lipoxygenase mRNA, complete cds /cds= (19,2010) /gb=L06040 /gi=205212 /ug=Rn.11318 /len=2048
L07736_at	L07736	3	Rat carnitine palmitoyltransferase I mRNA, complete cds /cds= (102,2423) /gb=L07736 /gi=294520 /ug=Rn.2856 /len=4377
M13100cds#1_at	M13100	3	RATLIN3A Rat long interspersed repetitive DNA sequence LINE3 (L1Rn)
M13100cds#2_s_at	M13100	3	RATLIN3A Rat long interspersed repetitive DNA sequence LINE3 (L1Rn)
M13100cds#3_f_at	M13100	3	RATLIN3A Rat long interspersed repetitive DNA sequence LINE3 (L1Rn)
M13100cds#4_f_at	M13100	3	RATLIN3A Rat long interspersed repetitive DNA sequence LINE3 (L1Rn)
M13100cds#5_s_at	M13100	3	RATLIN3A Rat long interspersed repetitive DNA sequence LINE3 (L1Rn)
M13100cds#6_f_at	M13100	3	RATLIN3A Rat long interspersed repetitive DNA sequence LINE3 (L1Rn)
M13101cds_f_at	M13101	3	RATLIN4A Rat long interspersed repetitive DNA sequence LINE4 (L1Rn)
M33648_at	M33648	3	Rat mitochondrial 3-hydroxy-3-methylglutaryl-CoA synthase mRNA, complete cds /cds= (49,1575) /gb=M33648 /gi=204618 /ug=Rn.6592 /len=1994
M33648_g_at	M33648	3	Rat mitochondrial 3-hydroxy-3-methylglutaryl-CoA synthase mRNA, complete cds /cds= (49,1575) /gb=M33648 /gi=204618 /ug=Rn.6592 /len=1994
M58634_at	M58634	3	Rat IGF binding protein-1 (rIGFBP-1) mRNA, complete cds /cds= (159,977) /gb=M58634 /gi=204732 /ug=Rn.10151 /len=1500
M96376_at	M96376	3	Rattus norvegicus neurexin II-alpha major (non-processed) and minor (alternatively spliced) mRNAs, complete cds /cds= (216,5363) /gb=M96376 /gi=205714 /ug=Rn.11282 /len=6411
rc_AA800243_at	AA800243	3	EST189740 Rattus norvegicus cDNA, 3' end /clone=RHEAM86 /clone_end=3' /gb=AA800243 /gi=2863198 /ug=Rn.8171 /len=613
rc_AA800844_s_at	AA800844	3	EST190341 Rattus norvegicus cDNA, 3' end /clone=RLUAM14 /clone_end=3' /gb=AA800844 /gi=2863799 /ug=Rn.770 /len=310
rc_AA875033_at	AA875033	3	UI-R-E0-cb-h-10-0-UI.s1 Rattus norvegicus cDNA, 3' end /clone=UI-R-E0-cb-h-10-0-UI /clone_end=3' /gb=AA875033 /gi=2979981 /ug=Rn.1699 /len=440
rc_AA891204_s_at	AA891204	3	EST195007 Rattus norvegicus cDNA, 3' end /clone=RHEAQ49 /clone_end=3' /gb=AA891204 /gi=3018083 /ug=Rn.4295 /len=502
rc_AI014169_at	AI014169	3	EST207724 Rattus norvegicus cDNA, 3' end /clone=RSPBF88 /clone_end=3' /gb=AI014169 /ug=Rn.2758 /len=553
rc_AI169612_at	AI169612	3	EST215498 Rattus norvegicus cDNA, 3' end /clone=RKJBV25 /clone_end=3' /gb=AI169612 /gi=3709652 /ug=Rn.4258 /len=580
rc_AI172411_at	AI172411	3	EST218418 Rattus norvegicus cDNA, 3' end /clone=RMUBZ17 /clone_end=3' /gb=AI172411 /gi=3712451 /ug=Rn.1491 /len=617
rc_AI237654_at	AI237654	3	EST234216 Rattus norvegicus cDNA, 3' end /clone=RPLDB93 /clone_end=3' /gb=AI237654 /ug=Rn.2758 /len=689
rc_AI639058_s_at	AI639058	3	mixed-tissue library Rattus norvegicus cDNA clone rx04826 3', mRNA sequence [Rattus norvegicus]
S69383_at	S69383	3	12-lipoxygenase [rats, pineal glands, mRNA, 2216 nt]

Group4 and group4-like genes

probeID	acc	Grp	AFFXdef	e13	e15	e
AA684963_at	AA684963	4	EST105871 Rat PC-12 cells, untreated Rattus sp. cDNA clone RPCAU48 5' end similar to FK506-binding protein, mRNA sequence [Rattus sp.]	1.144121	1.160416	1
AB000098_g_at	AB000098	4	Rattus norvegicus mRNA for MIPP65, complete cds /cds= (18,1394) /gb=AB000098 /gi=2780407 /ug=Rn.6452 /len=1468	1.01787	1.165576	0
AB000507_at	AB000507	4	Rattus norvegicus mRNA for aquaporin 7, complete cds /cds= (261,1070) /gb=AB000507 /gi=2350842 /ug=Rn.11111 /len=1267	0.234624	0.256025	0
AB002584_at	AB002584	4	Rat mRNA for beta-alanine-pyruvate aminotransferase, complete cds /cds= (8,1546) /gb=AB002584 /gi=1944135 /ug=Rn.1874 /len=2151	0.185209	0.17907	0
AB004277_at	AB004277	4	Rat mRNA for protocadherin 5, partial cds	1.974012	1.951422	2
AB004559_at	AB004559	4	Rattus norvegicus mRNA for multispecific organic anion transporter, complete cds /cds= (275,1930) /gb=AB004559 /gi=2361034 /ug=Rn.11113 /len=2221	0.737711	0.727385	0
AB008807_at	AB008807	4	Rattus rattus mRNA for glutathione-dependent dehydroascorbate reductase, complete cds	1.580715	1.549094	1
AB008807_g_at	AB008807	4	Rattus rattus mRNA for glutathione-dependent dehydroascorbate reductase, complete cds	1.381187	1.300656	1
AB010428_s_at	AB010428	4	Rattus norvegicus mRNA for acyl-CoA hydrolase, complete cds	0.698624	0.660609	0
AB012944cds_s_at	AB012944	4	Rattus norvegicus gene for parathyroid hormone/parathyroid hormone related protein receptor, partial cds	0.881641	0.857197	0
AB013455_at	AB013455	4	Rattus norvegicus mRNA for NaPi-2 gamma, complete cds	0.001209	0.001207	0
AB013455_g_at	AB013455	4	Rattus norvegicus mRNA for NaPi-2 gamma, complete cds	0.061567	0.047146	0
AB015433_s_at	AB015433	4	Rattus norvegicus mRNA for 4F2 heavy chain (4F2hc), complete cds	0.735678	0.748091	0
AB016536_s_at	AB016536	4	Rattus norvegicus mRNA for AIF-C1, complete cds	1.181801	1.060405	1
AB017820_at	AB017820	4	Rattus norvegicus mRNA for Klotho, complete cds	0.877182	0.906884	0
AF007107_s_at	AF007107	4	Rattus norvegicus soluble cytochrome b5 mRNA, complete cds /cds= (30,332) /gb=AF007107 /gi=2257954 /ug=Rn.1055 /len=520	0.800485	0.814876	0
AF013145_at	AF013145	4	Rattus norvegicus Diphor-1 mRNA, complete cds /cds= (46,1470) /gb=AF013145 /gi=2331223 /ug=Rn.10800 /len=1953	0.258409	0.31503	0
AF022247_at	AF022247	4	Rattus norvegicus intrinsic factor-B12 receptor precursor (CUBILIN) mRNA, complete cds /cds= (0,10871) /gb=AF022247 /gi=2961489 /ug=Rn.3236 /len=11249	0.456757	0.518883	0
AF025308_f_at	AF025308	4	Rattus norvegicus MHC class Ib antigen (RT1.Cl) gene, complete cds /cds= (0,1133) /gb=AF025308 /gi=2570820 /ug=Rn.11244 /len=1134	0.686677	0.53368	0
AF030358_g_at	AF030358	4	Rattus norvegicus chemokine CX3C mRNA, complete cds	0.902941	0.731506	0
AF030378_at	AF030378	4	Rattus norvegicus angiopoietin-2 mRNA, partial cds	1.059772	1.040822	1
AF039890mRNA_s_at	AF039890	4	RNAPN2 Rattus norvegicus aminopeptidase N (APN) gene, exon 2 and partial cds	0.87603	0.799788	1
AF045464_s_at	AF045464	4	Rattus norvegicus aflatoxin B1 aldehyde reductase (AFAR) mRNA, complete cds	0.440859	0.43786	0
AF048828_g_at	AF048828	4	Rattus norvegicus voltage dependent anion channel (RVDAC1) mRNA, complete cds	1.373484	1.274551	1
AF062389_at	AF062389	4	Rattus norvegicus kidney-specific protein (KS) mRNA, complete cds /cds= (106,1824) /gb=AF062389 /gi=3127192 /ug=Rn.14875 /len=2426	0.231218	0.234442	0
AF068860_s_at	AF068860	4	Rattus norvegicus beta defensin-1 mRNA, complete cds	0.167747	0.203891	0
AF074609mRNA_f_at	AF074609	4	Rattus norvegicus MHC class I antigen (RT1.EC3) gene, complete cds	0.545313	0.392613	0

Group5 and group5-like genes

probeID	acc	Grp	AFFXdef	e13	e15	e
AB000778_s_at	AB000778	5	Rattus norvegicus mRNA for phospholipase D, complete cds /cds= (195,3419) /gb=AB000778 /gi=2828349 /ug=Rn.11130 /len=4945	0.646359	0.587145	0
AB003400_at	AB003400	5	Rattus norvegicus mRNA for D-amino-acid oxidase, complete cds /cds= (96,1136) /gb=AB003400 /gi=2541861 /ug=Rn.10839 /len=1646	0.148577	0.161304	0
AB008423_s_at	AB008423	5	Rattus norvegicus mRNA for CYP2D2, complete cds	0.179929	0.260186	0
AF004017_at	AF004017	5	Rattus norvegicus electrogenic Na ⁺ bicarbonate cotransporter (NBC) mRNA, complete cds /cds= (23,3130) /gb=AF004017 /gi=2897074 /ug=Rn.11114 /len=3449	0.312152	0.331976	0
AF044574_at	AF044574	5	Rattus norvegicus putative peroxisomal 2,4-dienoyl-CoA reductase (DCR-AKL) mRNA, complete cds	0.106995	0.144656	0
AF056031_at	AF056031	5	Rattus norvegicus kynurenine 3-hydroxylase mRNA, complete cds	0.506565	0.471551	0
AF056333_s_at	AF056333	5	Rattus norvegicus cytochrome P450 2E1 (CYP2E1) mRNA, partial cds	0.292322	0.279612	0
AF058714_at	AF058714	5	Rattus norvegicus sodium-dicarboxylate cotransporter SDCT1 mRNA, complete cds /cds= (64,1827) /gb=AF058714 /gi=3065813 /ug=Rn.10821 /len=2428	0.954604	0.377332	0
AF067650_at	AF067650	5	Rattus norvegicus sarcosine dehydrogenase (SarDH) mRNA, complete cds	1.446515	1.017401	0
AF074608mRNA_f_at	AF074608	5	Rattus norvegicus MHC class I antigen (RT1.EC2) gene, complete cds	0.204285	0.308606	0
AF082834_s_at	AF082834	5	Rattus norvegicus 4-hydroxyphenylpyruvate dioxygenase (HPPD) mRNA, complete cds	0.092891	0.106202	0
D10693_at	D10693	5	RATHNM Rattus norvegicus mRNA for histamine N-methyltransferase, complete cds	0.923792	0.780204	0
D13906_g_at	D13906	5	RATADHWC Rat mRNA for ADH water channel, complete cds	0.007965	0.094723	0
D17370_at	D17370	5	RATCGL Rat mRNA for cystathionine gamma-lyase, complete cds	0.00446	0.051392	0
D44494_at	D44494	5	RAT3H34DB Rat mRNA for 3-hydroxyanthranilate 3,4-dioxygenase, complete cds	0.003151	0.003146	0
D49363_s_at	D49363	5	RATPSP1 Rat mRNA for perchloric acid soluble protein, complete cds	0.334136	0.261124	0
D50564_at	D50564	5	Rat mRNA for mercaptopyruvate sulfurtransferase, complete cds /cds= (209,1102) /gb=D50564 /gi=1741863 /ug=Rn.2922 /len=1304	0.010363	0.294559	0
D85100_at	D85100	5	Rat mRNA for very-long-chain acyl-CoA synthetase, complete cds /cds= (794,2656) /gb=D85100 /gi=1752739 /ug=Rn.3608 /len=2963	0.271786	0.300301	0
D86039_at	D86039	5	Rat mRNA for ATP-sensitive inwardly rectifying K ⁺ channel, BIR(Kir6.2), complete cds /cds= (536,1708) /gb=D86039 /gi=1655429 /ug=Rn.3985 /len=3305	0.229327	0.029549	0
D87839_at	D87839	5	Rattus norvegicus mRNA for beta-alanine oxoglutarate aminotransferase, complete cds /cds= (102,1604) /gb=D87839 /gi=3046864 /ug=Rn.10090 /len=1726	1.045966	1.078309	0
E00717UTR#1_s_at	E00717	5	cDNA encoding cytochrome P-450 from Rat Liver	0.462599	0.470099	0
E00778cds_s_at	E00778	5	Rat liver cytochrome P-450 MC gene	0.640304	0.622981	0
J00758_s_at	J00758	5	RATPKL rat pancreatic preprokallikrein mRNA	0.235183	0.19108	0
J02612mRNA_s_at	J02612	5	RATUDPGT Rat UDP-glucuronosyltransferase mRNA, complete cds	0.371998	0.322342	0
J03179_g_at	J03179	5	Rat D-binding protein mRNA, complete cds /cds= (367,1344) /gb=J03179 /gi=203942 /ug=Rn.11274 /len=1622	0.321262	0.258114	0
J04792_at	J04792	5	Rattus norvegicus ornithine decarboxylase (ODC) gene, complete cds /cds= (0,1385) /gb=J04792 /gi=205805 /ug=Rn.874 /len=2102	1.569898	1.797296	1